<u>Remarks</u>

The above Amendments and these Remarks are in reply to the Office Action mailed September 6, 2006. Claims 1-27 were pending in the Application prior to the outstanding Office Action. In the Office Action, the Examiner rejected claims 1-4 and 6-19. Claims 5 and 20 are objected to and claims 21-17 are subject to restriction and/or election requirement. The present Response amends claims 1, 4-7, 9, 16 and 20 and cancels claims 3 and 21-27. Reconsideration of the rejections is requested.

I. ELECTIONS/RESTRICTIONS

In the Office Action, the Examiner restricted the pending application to one of the following inventions:

I. Claims 1-20, drawn to sampling an input signal, classified in class 375, subclass 355.

II. Claims 21-27, drawn to calculating deterministic jitter, classified in class 702, subclass 69.

The Examiner writes that "during a telephone conversation with Tom Ward on 5/30/2006 a provisional election was made with traverse to prosecute the invention of group I, claim 1-20. Affirmation of this election must be made by applicant in replying to this Office Action." See OA, page 2. Applicants affirm the election of Group I, claims 1-20. Further, Applicants request cancellation of claims 21-27 for pursual in a divisional application.

II. OBJECTION TO THE DRAWINGS BY EXAMINER

In the Office Action, the Examiner objected to Fig. 1 and 2, writing that "Figure 1 and Fig 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated." See OA, page 3. Applicants have amended the drawings to include the legend "Prior Art". Removal of the objection is requested.

III. REJECTION UNDER 35 U.S.C. §102(E) AS BEING ANTICIPATED BY *DALLY ET AL.* (US PAT. APPL. PUBL. NO. 2003/0086339)
Claims 1, 2, 6, 7, 16-18

The Examiner rejected claims 1, 2, 6, 7 and 16-18 as being anticipated by *Dally* under 35 U.S.C. §102(b). Applicants respectfully traverse the rejection.

In the Office Action, the Examiner writes that *Dally* teaches all of the limitations of claim 1. *Dally* teaches sampling a data signal to determine whether a data edge lags or precedes a clock edge. A phase controller adjusts the phase of the clock signal based on the results. Thus, *Dally* teaches a clock recovery circuit that corrects a clock signal from a data signal.

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However, nowhere does *Dally* disclose "an apparatus for sampling an input signal...comprising...a processing unit coupled to the sampling module, wherein the processing unit is adapted to analyze a sampled point from the sampling module and arrange the sampled point in an eye diagram," as recited in claim 1. The Examiner writes in rejecting claim 3 under 35 U.S.C. §103(a) over *Dally* in view of Applicant Admitted Art (AAPA), that it would have been obvious "to combine the teachings of Dally et al and applicant's admission of prior art, since eye diagram is useful in the art to analyze the data and a common way to assess the integrity of the signal." See OA, page 5. *Dally* teaches a clock recovery circuit that uses a data signal to analyze a clock signal. In contrast, the present invention discloses the opposite. Claim 1 recites "the sampling module samples the input signal based on the synthesized signal frequency [dependent on the synchronous clock signal]...a processing unit coupled to the sampling module, wherein the processing unit is adapted to analyze a sampled point from the sampling module and arrange the sampled point in an eye diagram."

The Applicant believes that *Dally* cannot be combined with AAPA to render claim 1 obvious under 103 (a) because, as stated in MPEP 2143.01, "obviousness can only be established by combining or modifying the teachings of the prior art...where there is some teaching, suggestion, or motivation to do so...the test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested". As mentioned above, the nature of the problem is one of sampling a data signal to analyze and arrange in an eye diagram. The nature of the problem is unrelated to clock signal recovery, thus one of ordinary skill in the art would not look to clock signal recovery references, but rather to references related to improving input signal sampling.

Further, nowhere does *Dally* disclose "d. analyzing a sampled point from the input signal; e. arranging the sampled point in an eye diagram" as recited in claim 16.

Because dependent claims have at least the features of the independent claim from which they depend, *Dally* does not anticipate claims 2, 6, and 7 (which depends from claim 1) or claims 17 and 18 (which depend from claim 16) under 35 U.S.C. §102(b).

IV.   REJECTION UNDER 35 U.S.C. §103(A) OVER *DALLY* IN VIEW OF AAIPA
Claims 3, 8-15

The Examiner rejected claims 3 and 8-15 under 35 U.S.C. §103(a) as being unpatentable over *Dally* in view of AAIPA. Applicants request cancellation of claims 3. Applicants respectfully traverse the rejection of claims 8-15.

For the reasons given above in Section III, it is asserted that *Dally* in view of AAIPA cannot be combined to render claim 1 obvious under 35 U.S.C. §103(a). Claim 8 depends from claim 1 and includes all

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of the features of claim 1; therefore, for the same reasons *Dally* in view of AAIPA cannot be combined to render claim 8 obvious under 35 U.S.C. §103(a).

In the Office Action, the Examiner writes that "although Dally et al couples a processor with sampling module, the processor does not arrange the sample point in a desired configuration…AAPA teaches [this] limitation." See OA, page 6. For the reasons given above in Section III, it is asserted that *Dally* in view of AAIPA cannot be combined to render claim 9 obvious under 35 U.S.C. §103(a). Claims 10-15 depend from claim 9 and include all of the features of claim 9; therefore, for the same reasons *Dally* in view of AAIPA cannot be combined to render claim 9 obvious under 35 U.S.C. §103(a).

V. REJECTION UNDER 35 U.S.C. §103(A) OVER *DALLY* IN VIEW OF OWEN

Claims 4 and 19

The Examiner rejected claim 4 under 35 U.S.C. §103(a) as being unpatentable over *Dally* in view of Owen. Applicants respectfully traverse the rejection.

For the reasons given above in Section III, it is asserted that *Dally* in view of Owen cannot be combined to render claims 4 and 19 obvious under 35 U.S.C. §103(a). Claim 4 depends from claim 1 and includes all of the features of claim 1, claim 19 depends from claim 16; therefore, for the same reasons *Dally* in view of *Owen* cannot be combined to render claims 4 and 19 obvious under 35 U.S.C. §103(a).

VI. ALLOWABLE SUBJECT MATTER

Claims 5 and 20

Applicants appreciate the indication that claims 5 and 20 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims.

VII. CONCLUSION

In light of the above, it is respectfully submitted that all of the claims now pending in the subject patent application should be allowable, and a Notice of Allowance is requested. The Examiner is respectfully requested to telephone the undersigned if he can assist in any way in expediting issuance of a patent.

The Commissioner is authorized to charge any underpayment or credit any overpayment to Deposit Account No. 06-1325 for any matter in connection with this response, including any fee for extension of time, which may be required.

Respectfully submitted,

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